Inter-Agency Flood Risk Characterization Workshop February 25-27, 2014 USACE Institute for Water Resources, Alexandria, VA, IWR Classroom

Summary of Available Datasets that are Relevant to Flood Risk Characterization

Dataset Name	Source	Flood Risk Category	Date Updated	Spatial Extent & Resolution	Format available	Access
National Flood Hazard Layer	FEMA	Hazard	Continuously	National; 1:12,000 scale	GIS data (raster)	Download. https://hazards.fema.gov/fe maportal/NFHL/

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective Flood Insurance Rate Map (FIRM) databases (a collection of the digital data that are used in GIS systems for creating new Flood Insurance Rate Maps) and Letters of Map Change (Letters of Map Amendment and Letters of Map Revision only) that create a seamless GIS data layer for United States and its territories.

				Window	/S
Hazus				software	Order from FEMA MSC.
	FEMA	Consequences	February 2012 National	package	http://www.fema.gov/hazus

Hazus is a nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes.

FEMA Disaster						Davidand
Declarations Library	FEMA	Consequences	January 2014	National	Excel Table	Download. http://tinyurl.com/nzlfzkp

FEMA Disaster Declarations Summary is a summarized dataset describing all federally declared disasters. This information begins with the first disaster declaration in 1953 and features all three disaster declaration types: major disaster, emergency and fire management assistance.

National Elevation					ArcGRID,	
				National; 1/3 arc-second and	GeoTIFF, BIL,	Order from USGS.
Dataset	USGS	Hazard	Bi-monthly	1/9 arc-second	GridFloat	http://ned.usgs.gov/

The National Elevation Dataset (NED) is the primary elevation data product of the USGS. The NED is a seamless dataset with the best available raster elevation data of the conterminous United States, Alaska, Hawaii, and territorial islands. It can be used in models to estimate flood inundation extent, flood depths and other elements of flood hazard.

2006 National Land	USGS, Multi-Resolution					
	Land Characteristics		Every Five		GIS data	Download.
Cover Database	Consortium	Consequences	Years	National; 30-meter	(raster)	http://www.mrlc.gov/

The National Land Cover Database (NLCD) serves as the definitive Landsat-based, 30-meter resolution, land cover database for the Nation. NLCD provides spatial reference and descriptive data for characteristics of the land surface such as thematic class (for example, urban, agriculture, and forest), percent impervious surface, and percent tree canopy cover. It can be used to estimate where people and structures are located for purposes of estimating flood exposure and damages. The 2011 NLCD is slated for release in late March of 2014.

Dataset Name	Source	Flood Risk Category	Date Updated	Spatial Extent & Resolution	Format available	Access
	Natural Resources Conservation Service	Hazard	2004	National; 1:24,000 scale	GIS data (digital vector datasets)	Download. http://nhd.usgs.gov/wbd.htm I

The Watershed Boundary Dataset (WBD) defines the areal extent of surface water drainage to a point, accounting for all land and surface areas. Watershed Boundaries are determined solely upon science-based hydrologic principles, not favoring any administrative boundaries or special projects, nor particular program or agency.

Flood Inundation						View online/download.
Mapping Program						http://water.usgs.gov/osw/fl
Mapping 1 rogram	USGS	Hazard	Continuously	By community	Online tool	ood_inundation/

The USGS Flood Inundation Mapping Program focuses its efforts at state and local levels to help communities understand flood risks and make cost-effective mitigation decisions. The flood inundation map library contains a series of sequential maps that help communicate where flooding may occur over a range of river levels. The library can be connected to real-time and forecasted river levels at USGS streamgages to help communities identify immediate risks during a flood.

US Census:						Download.
Demographics,		Consequences			CSV/	http://www.census.gov/main
Households, Income	US Census	Vulnerability	2010	National; Census block	spreadsheet	/www/access.html

The US Census provides essential data on population, demographics, households, and income for mapping and estimating the consequences of flooding.

Social Vulnerability						Download.
Index (SoVI) 2006-	University of South				CSV/	http://webra.cas.sc.edu/hvri/
2010	Carolina	Vulnerability	2010	National; County-level	spreadsheet	products/sovi.aspx

The Social Vulnerability Index (SoVI®) 2006-10 measures the social vulnerability of U.S. counties to environmental hazards. The index is a comparative metric that facilitates the examination of the differences in social vulnerability among counties. Data from the American Community Survey is used in a principal components analysis to create the SoVI. In SoVI® 2006-10, seven significant components explain 72% of the variance in the data.

Homeland Security						Order DVDs.
Infrastructure Program						https://www.hifldwg.org/hsip-
(HSIP) Gold	DHS	Consequences	2013	National	GIS data	guest

HSIP Gold is a unified homeland infrastructure geospatial data inventory assembled by National Geospatial Intelligence Agency in partnership with the Department of Homeland Security for common use by the Federal Homeland Security and Homeland Defense (HLS/HD) Community. It is a compilation of over 450 geospatial datasets, characterizing domestic infrastructure and base map features, which have been assembled from a variety of Federal agencies and commercial sources. Access is limited to federal government members, National Guard Forces, and to States with approved Presidential Disaster or Emergency Declarations to support the HD, HLS and NP – PPMR&R missions.

ataset Name	Source	Flood Risk Category	Date Updated	Spatial Extent & Resoluti	Format on available	Access
HSIP Freedom	DHS	Consequences	2013	National	GIS data	Order DVDs. https://www.hifldwg.org/hsip quest

National Inventory of Dams	USACE	Flood Risk Reduction	5/1/2013	National	Download. http://geo.usace.army.mil/pg is/f?p=397:1:0
The N	NID contains data	on the location, hazard p	otential, and ot	her characteristics fo	or over 80,000 dams across the U.S.

National Levee Database	USACE	Flood Risk Reduction	2013	National	Download. http://nld.usace.army.mil/egi Web-based tool_s/f?p=471:1:		
The Levee Safety Program contains data on the location, hazard potential, and other characteristics of USACE owned/operated levees.							

Digital Coast Sea Level Rise Inundation						Download. http://csc.noaa.gov/arcgis/re
data	NOAA	Hazard	TBD	National	Shapefile	st/services/dc_slr
The NOAA Sea Level	Rise Inundation r	maps use the best publica	llv availabl	e and accessible elevation	n data to map literature-su	upported levels of sea level

The NOAA Sea Level Rise Inundation maps use the best publically available and accessible elevation data to map literature-supported levels of sea leve rise on top of mean high water.

Ī	Integrated Climate				GIS data	Download.
	and Land Use	EPA Global Change			(shapefiles and	http://www.epa.gov/ncea/glo
	Scenarios (ICLUS)	Research Program	Consequences	40665 National; County-level	raster)	bal/iclus/

The EPA ICLUS project is developing scenarios broadly consistent with global-scale, peer-reviewed storylines of population growth and economic development, which are used by climate change modelers to develop projections of future climate. ICLUS provides projections of US county population and housing density, which can be used in estimating potential future trends in flood consequences.

Dataset Name	Source	Flood Risk Category	Date Updated	Spatial Extent & Resolution	Format available	Access
US Regional Economic Forecasts & Analysis	IHS Global Insight	Consequences	Yearly	National; County-level	CSV/ spreadsheet	http://tinyurl.com/mkdhnwd
Both IHS Global Insight and Woods and Poole Economics produce forecasts of economic trends for U.S. counties. Both companies' forecasts go out 30 years and are updated regularly. IHS's forecasts cover over 30 variables including income, wages, and employment for 11 major industry categories. These						

County Economic Forecasts to 2040	Woods and Poole	Consequences Yearly	National: County-level	CSV/	CD-ROM. http://www.woodsandpoole.

forecasts can be used to estimate potential future flood consequences.

Both IHS Global Insight and Woods and Poole Economics produce forecasts of economic trends for U.S. counties. Both companies' forecasts go out 30 years and are updated regularly. The forecasts from Woods and Poole are similar to IHS's forecasts, which cover over 30 variables including income, wages, and employment for 11 major industry categories. These forecasts can be used to estimate potential future flood consequences.

County-level					
economic activity					
data	IMPLAN	Consequences	2012	National; County-level	http://implan.com/
		<u> </u>		<u> </u>	<u> </u>

IMPLAN data can be used to calculate various measures of economic activity at the county level, including GDP, total output, and employee compensation.